

**Standard Operating Procedure
for**

Proficiency Test Evaluation

Revision 7

Laboratory Services Division

Office of Environmental Assessment

Louisiana Department of Environmental Quality

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Document Review and Revision Record

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Standard Operating Procedures
for
PROFICIENCY TEST EVALUATION
SOP #LELAP T- 003

1.0 Purpose

The purpose of this standard operating procedure (SOP) is to establish requirements determining how the Louisiana Environmental Laboratory Accreditation Program (LELAP) evaluates proficiency test (PT) results. PT results are essential to demonstrate the laboratory's competency to perform analyses.

2.0 Applicant Laboratories PT Participation

2.1 LELAP regulations require all laboratories accredited or seeking accreditation to participate in a Louisiana Department of Environmental Quality (LDEQ, Department) approved proficiency-testing program. The laboratory must perform PT analyses for each matrix type, technology/method, and analyte/analyte group for which the lab seeks to receive accreditation.

2.2 Applicant laboratory PT results must be from a Department approved PT vendor. Results received from any other PT vendor will not be accepted. The list of approved PT vendors shall be made available to the applicant laboratories by the LELAP Assessor (Assessor) or may be acquired from LELAP's website.

2.3 Assessors shall verify with NELAP and A2LA the approved and/or certified PT vendors. Each Assessor shall check the NELAP and A2LA websites to obtain the list of PT vendors and the scope of the PT vendors' certification or approval.

2.4 In the event that PT tests are not available for a particular test category, the laboratory must submit an "analytical data package" as defined by LAC 33:I.4711B.

2.5 Proficiency test studies shall be conducted at a minimum of once every six months. Laboratories set their own semi-annual schedule. Quality assurance test results will not be accepted as PT results.

2.6 The laboratory must perform satisfactorily in at least two proficiency test studies within the most recent three proficiency test studies attempted in order to be accredited or to maintain accreditation.

2.7 Laboratories must return results to the PT Provider no later than 45 calendar days from the opening of the PT study.

2.8 The applicant's PT results must be submitted to LELAP within 30 days of the laboratory having received their results or the laboratory must have a copy of the PT results sent directly to LELAP from the PT vendor.

2.9 Laboratories receiving test results that are "unacceptable" for a specific analyte must investigate and identify likely cause for "unacceptable" results, resolve the problem and report the activities to LELAP. A corrective action PT result for analytes for which corrective action was required must be reported to LELAP.

3.0 Receiving and Uploading of PT Results in the Accrediting Authority Management System (AAMS)

3.1 All PT providers shall submit to LELAP PT data electronically in the format necessary to import the information into AAMS. The format and fields required for the AAMS import are shown in Appendix A.

3.2 To be able to upload all PT data into AAMS, every laboratory must have an EPA laboratory code. However, not all laboratories can acquire an EPA lab code. Hence, LELAP generates laboratory codes that are unique for each laboratory. The codes start with the abbreviation of the state where the laboratory is located, followed by the assigned LELAP Lab ID. The unique ID will be called LELAP laboratory code. Currently, LELAP is using EPA lab codes as the unique identifier of the laboratory with respect to PT data import. As soon as the LELAP laboratory codes are distributed to all the laboratories accredited by LA DEQ, the database will be updated. EPA lab codes will be replaced by the LELAP lab codes and the SOP will be updated accordingly. All the PT providers will be notified of the changes.

3.3 LELAP receives paper copy and CDs or floppy disks from some PT providers. Other PT providers submit electronic PT data to the LELAP Supervisor. The supervisor then forwards the electronic copies to the LELAP Assessor in-charge of the PT data import into AAMS. The files are saved in the Assessor's computer. Each PT provider has its own folder. PT data are organized by year. PT data from Environmental Resource Associates (ERA) are downloaded off the ERA's website. ERA notifies the LELAP Supervisor and the Assessor-in-charge when PT data are available for download. The downloaded PT data are saved in the provider's folder.

3.4 PT data are imported into AAMS following the ITToolwork's procedure for uploading data. In the event that an error occurs while uploading the data, the error summary report can be printed. The report shows where and why the error occurred, and the number of rows or lines rejected. The Assessor-in-charge verifies the problem by calling the PT provider or sending a

copy of the error summary report. One type of an error is a typographical error. For example the laboratory's code in the database is LA00432 and the code in the electronic file submitted is LA00342. The PT provider notifies the Assessor-in-charge of the correct lab code and the name of the laboratory or organization. The problem is resolved via two mechanisms: a) the PT provider corrects the error and electronic copy is sent back to the Assessor-in-charge, or b) the Assessor-in-charge corrects the error and saving the file with a different file name. The revised PT data file is then uploaded into AAMS.

3.5 The Assessor-in-charge records all the PT data import activities in a logbook specifically created for PT data import. All other activities related to PT data import including phone calls, correcting errors in the PT data files and re-uploading of data into AAMS are recorded and dated.

3.6 PT data in CDs and/or floppy disks received by mail are submitted to the Assessor-in-charge. In the event that the Assessor-in-charge is out of the office, all CDs and floppy disks are placed in the designated folder labeled PT Results. The Assessor-in-charge then follows the procedures in 3.1 to 3.5.

4.0 Assessors Evaluation of PT Results

4.1 Assessors shall evaluate laboratories having completed two rounds of proficiency testing on the PT results submitted to LELAP. Laboratories must employ the same procedures (including handling and analysis) used for sample analysis in the analysis of PT samples. Compliance with this requirement (NELAC 2.5) is assessed during the on-site assessment described in SOP T-004.

4.2 PT results shall be submitted to LELAP by the Department approved PT vendor or the laboratory. PT results submitted by the laboratory must be copies of the original PT results on the PT vendor's stationary in order to be accepted. The Program Analyst for LELAP shall date stamp the PT results and handle them as described in SOP #LELAP A-001.

4.3 The assigned Assessor shall review PT results to identify all "unacceptable" or "unsatisfactory" scores and to ensure that the laboratory has performed proficiency tests for all test categories for which they have applied for accreditation. If the laboratory has not participated in proficiency tests for all test categories, then the assigned Assessor shall notify the laboratory in writing of this finding as soon as discovered. The Assessor shall not recommend an applicant laboratory for accreditation for test categories for which the laboratory has not completed proficiency testing.

4.4 The assigned Assessor shall compare the current set of PT results against the application or scope of accreditation and the last set of PT results submitted by the applicant laboratory. The assigned Assessor shall notify the laboratory of any discrepancies between the application or scope of accreditation and the PT results.

4.5 Laboratories receiving initial accreditation shall not be accredited for those analytes for which the PT results were “unacceptable” or “unsatisfactory” in two of the last three consecutive rounds of PT studies.

4.6 Accredited laboratories having received scores of “unacceptable” or “unsatisfactory” for any specific matrix/method/analyte in two of the last three consecutive rounds shall be suspended for that analyte until such time as the laboratory has successfully performed two of three PT rounds for that method/matrix/analyte.

4.7 The assigned Assessor shall notify the laboratory of the suspension or revocation of accreditation for any specific analyte meeting the criteria established in section 4.6 of this SOP in writing within 60 calendar days.

4.8 The assessor will also determine if the laboratory has received an acceptable score for at least 80% of analytes for analyte group PT samples. If the laboratory has failed more than 20% of analytes in an analyte group, the laboratory will receive a score of “Not Acceptable” for all analytes in that group. The laboratory must be informed in writing within 60 calendar days.

4.9 If at any time the assessor becomes aware that a laboratory has sent any portion of a PT sample to another laboratory for analysis, analyzed a PT sample for another laboratory, communicated with another laboratory concerning a PT sample, or attempted to obtain the value of a PT, the assessor will notify the accreditation officer immediately. Any of the above actions are cause for suspension or disaccreditation per LAC 5705.A.

5.0 Corrective Action Proficiency Tests

5.1 The assigned Assessor shall review all PT results and when necessary ensure that the laboratory has submitted any necessary corrective action findings and the corrective action PT results. The laboratory is required to submit a corrective action report and a corrective action PT for any failed PT study. Quick or supplemental studies provided by an approved PT provider are acceptable. Corrective action PTs must be completed within 60 days of a failed PT test.

5.2 If a laboratory fails a corrective action PT, the laboratory has failed two consecutive studies and is treated as in Section 4.6 and 4.7 of this SOP.

5.3 Corrective Action Proficiency test results will be considered when establishing the requirement that a laboratory pass two of three PT studies to maintain accreditation.

APPENDIX A

Format and Fields Required for AAMS Import of PT Data

AAMS Import Fields

<u>Field Name</u>	<u>Field Type</u>	<u>Field Description</u>	<u>Sample Data</u>
Lab Code	Text	Lab's EPA Code/LELAP Code	OH00999
Provider ID	Text	NVLAP Provider Code	200999-9
Study Date	Date/Time	Closing Date of PT Study	1/1/2003
Study Number	Integer	Provider study ID	4312
Analyte Code	Long Integer	Numeric NELAP code	1001
Result Text	Lab reported value	Actual data by lab	32.6
Low Limit	Numeric	Low end of acceptance limit	20.0
High Limit	Numeric	High end of acceptance limit	55.3
Evaluation	Text	Evaluation of results	ACCEPTABLE
Method Description	Text	Text description	EPA 200.7
Method Code	Long Integer	Numeric NELAP Code	1003456
PT Program	Text	PT Study Type	CWA
Lot Number	Text	Unique sample lot number	12345-22334
Assigned Value	Numeric	Assigned value of analyte	34.2
Mean	Numeric	Mean value from the study	36.1
Standard Deviation	Numeric	Standard Deviation value from	4.5
Series ID	Text – 1	Micro Series Identifier	A
Sample Number	Integer	Micro Sample Number	103
EvaluationMicro	Text	Micro Analyte Evaluation	Acceptable
Units	Text	The units for the assigned value	mg/L

Evaluation:

When reporting the Evaluations, you must either use the EPA Terminology (ACCEPT, NOT ACCEPT, CK. FOR ERR., NO EVAL.0 or the following:
Acceptable, Not Acceptable, Check for Error, ""(BLANK) = NO EVAL.
Any variation in the terminology will cause your data files to be rejected.

PT Program:

When reporting PT Programs you must use the terminology from the following list:

WP, CWA, WPMICRO, CWAMICRO, WS, SDWA, WSMICRO, SDWAMICRO, RCRA, CAA

File Formatting:

Comma delimited format. DO NOT include "," internally within your data fields. If you have a need for reporting "," values with any fields, replace the "," with "~" (tilde) character.